COLUMNAR SECTION

			• •		GENERA	ALIZED SECTION OF THE SEDIMENTARY ROCKS OF THE TOLCHESTER QUADRA SCALE: 1 INCH=200 FEET.	ANGLE, MD.
SYSTEM.	Series.	FORMATION.	Symbol.	Columnar Section	THICKNESS IN FEET.	CHARACTER OF ROCKS.	CHARACTER OF TOPOGRAPHY AND SOILS.
. ₩	PLEISTOCENE (Columbia group)	Talbot formation.	Qt	/	40±	Gravel, sand, clay, peat, and ice-borne boulders. Coarser material chiefly at the base.	Very flat to gently rolling lowlands. Sandy soil adapted to trucking.
CRETACEOUS TERTIARY QUATERNARY		Wicomico formation.	Qw		70±	Gravel, sand, clay, and ice-borne boulders. Coarser cross-bedded deposits generally at base.	Flat interstream areas and benches, 40 to 100 feet above sea level. Sandy loam to coarse sandy soil, suitable for truck, fruit, and grain.
		Sunderland formation.	Qs		35	Gravel, sand, clay, and ice-borne boulders.	Isolated hilltops, 90 to 200 feet above sea level. Coarse sandy soil, not well adapted to cultivation
	PLIO- CENE?	Brandywine formation. UNCONFORMITY UNCONFORMITY	Ть	ть	25	Imperfectly sorted gravel, sand, and loam, in places indurated.	Isolated high hilltops, 180 to 300 feet above sea level. Coarse sandy soil, seldom cultivated.
	MIOCENE (Chesapeake group)	Calvert formation.	Тс	T QW Qt	100	Gray to white diatomaceous earth, grading upward into blue, drab, or yellow sandy clays and shell marl.	Broad, shallow valleys. Sandy loam, suitable for raising early vegetables.
	EOCENE (Pamunkey group)	Aquia formation.	Та		75	Light-blue to dark-green glauconitic sand, glauconite, and shell marl, in places firmly indurated by iron oxide.	Steep hilly country and stream bottoms. Fertile sandy soil.
	CRETACEOUS	Monmouth formation.	Km		65	Reddish-brown to greenish-black glauconitic arenaceous sands, containing many iron crusts.	Stream bottoms, slopes, and bluffs. Dark sandy soil.
		Matawan formation.	Kmw		70	Mixture of glauconitic sand and dark-colored clay, containing abundant mica flakes and in places numerous clay-ironstone concretions and some pyrite.	Low hills and stream bottoms Dark sandy clay soil.
		Magothy formation.	Kma		75	Light-colored loose sands, in many places cross-bedded, containing fine partings of clay, much lignite, and many layers of ferruginous sandstone.	Rolling country and lowlands along streams. Sandy soil.
	UPPER	Raritan formation.	Kr		120	White to highly colored clays, sands, and gravels, and some lignite.	Gentle slopes along streams. Sandy to argillaceous soil of low fertility.
	LOWER CRETACEOUS (Potomac group)	Patapsco formation.	Kpt		800	Interbedded highly colored, variegated clays, sands, and gravels, containing some lignite, pyrite, and iron ore.	Rolling hills and slopes. Sandy soil of little fertility.
		Arundel formation.	Ka		65	Drab to red and variegated lenticular clay, containing lignite and carbonate iron ore.	Gentle ridge tops and valley slopes. Argillaceous sandy soil of low fertility.
		Patuxent formation.	Кр		90	Buff fine to coarse cross-bedded sand, containing lenses of clay, bands of gravel, and basal conglomerate in many places.	Mostly steep slopes. Sandy to argillaceous soil of low fertility.
CAMBRIAN? AND POSSIBLY ORDOVICIAN		Cockeysville marble.	€c		500	Medium coarse grained saccharoidal magnesian marble, containing scattered quartz grains and numerous mica flakes.	Valleys and gentle slopes. Deep reddish-yellow clay soil.
CAMBRIAN?	LOWER CAMBRIAN ?	Setters quartzite.	€s .		500	Cream-colored thin-bedded tourmaline-bearing quartzite, massive vitreous quartzite, and quartz schist.	Small ridges and steep slopes. Thin sandy soil.
PRE-CAMBRIAN		Wissahickon mica gneiss and Baltimore gneiss.	d wg bgn		,	Micaceous and feldspathic gneiss of sedimentary ond igneous origin and intrusive granite, gabbro, and serpentine.	Rough slopes and comparatively flat interstream areas. Deep reddish clay soil.



PLATE I.—IRREGULARITY IN BEDDING OF MOTTLED CLAY AND GRAVELLY SAND OF PATUXENT FORMATION IN CUT ON BALTIMORE & OHIO RAILROAD NEAR JOPPA, HARFORD COUNTY.



PLATE II.—VERTICALLY JOINTED CLAY OF RARITAN FORMATION IN WAVE-CUT CLIFF, WORTON POINT, KENT COUNTY.

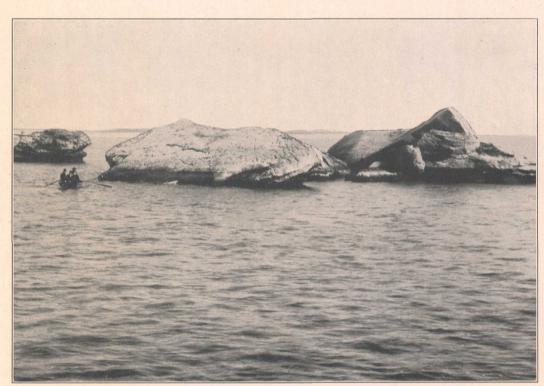


PLATE III.—EROSION REMNANTS OF WHITE QUARTZOSE SANDSTONE OF RARITAN FORMATION IN PATAPSCO RIVER OFF ROCK POINT, ANNE ARUNDEL COUNTY. Known as the White Rocks.

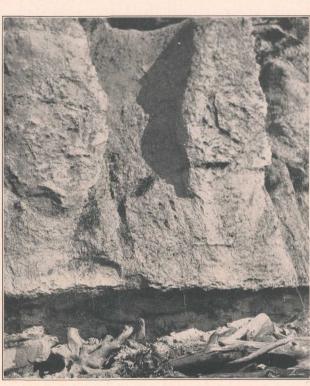


PLATE IV.—BLUFF OF CLAY MARL OF MATAWAN FORMATION UNDERLAIN BY MAGOTHY FORMATION NEAR GROVE POINT, CECIL COUNTY. The ledge is undercut by the removal of loose laminated sand of the Magothy formation by marine erosion.

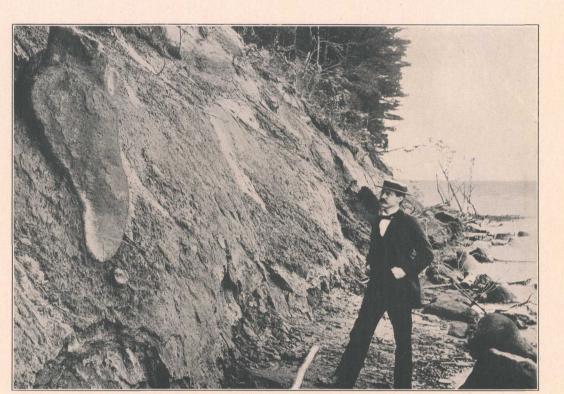


PLATE V.—MATAWAN FORMATION CONTAINING LARGE SEAL-SHAPED CONCRETIONS, ON SOUTH SHORE OF GIBSON ISLAND, ANNE ARUNDEL COUNTY. Concretions derived from the rock in the bluff by weathering lie along the beach. There is a large specimen of Exogyra costata just below the concretion in the bluff.



Contains casts of large mollusks of Eocene age.

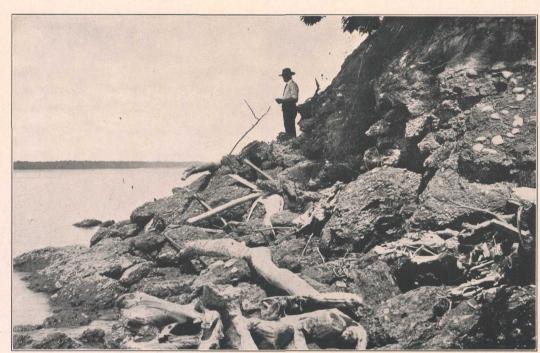


PLATE VI.—INDURATED FOSSILIFEROUS AQUIA FORMATION ON CHESTER
RIVER, 2½ MILES BELOW CHESTERTOWN, KENT COUNTY.

PLATE VII.—CONGLOMERATE IN WICOMICO FORMATION, NEAR BETTERTON, KENT COUNTY.

The Wicomico formation extends below sea level at this point. The Wicomico formation extends below sea level at this point.

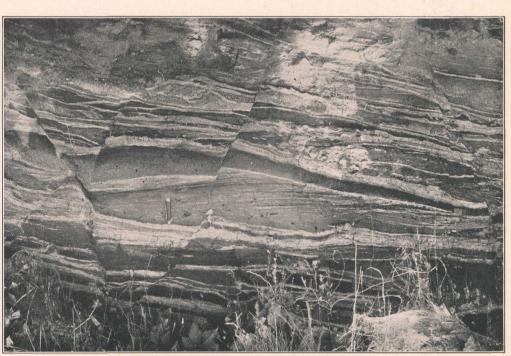


PLATE VIII.—RECENT MINOR FAULTING OF INTERBEDDED CLAY AND SAND OF TALBOT FORMATION ON MORGAN CREEK, KENT COUNTY.

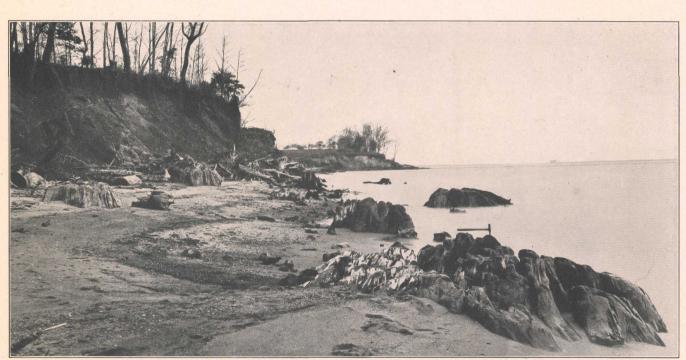


PLATE IX.—BURIED FOREST IN TALBOT FORMATION REPRESENTED BY STUMPS OF TREES WHICH ARE EXPOSED BY RECENT EROSION ON SHORE SOUTH OF BODKIN POINT, ANNE ARUNDEL COUNTY. Large cypress stumps standing upright on the beach were embedded in peat of the Talbot formation. The 20-foot cliff has been cut back and the stumps uncovered during the last 30 years by marine erosion.



PLATE X.—SAND SPIT THAT FORMS BAR ACROSS MOUTH OF LLOYD CREEK, KENT COUNTY. View looking west from top of cliff opposite mouth of creek.